



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/634,618	08/05/2003	Joseph S. Bowers JR.	13064US02	6586
23446	7590	09/27/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD 500 WEST MADISON STREET SUITE 3400 CHICAGO, IL 60661			KUGEL, TIMOTHY J	
			ART UNIT	PAPER NUMBER
			1712	

DATE MAILED: 09/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/634,618	BOWERS ET AL.	
	Examiner	Art Unit	
	Timothy J. Kugel	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 11-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 18 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>8/5/03 and 7/20/05</u> . | 6) <input type="checkbox"/> Other: ____. |

[Handwritten signature]

DETAILED ACTION

1. Claims 1-18 are pending as filed on 5 August 2003. Claims 11-17 are withdrawn from consideration.

Restriction

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-10 and 18, drawn to a stabilized aqueous dispersion of carbon and a method of stabilizing an aqueous dispersion of carbon by reducing alkalinity, classified in class 516, subclass 38.
- II. Claims 11-17, drawn to a method of stabilizing an aqueous dispersion of carbon by isolating it from isolating it from reactive atmospheric gas, classified in class 422, subclass 41.

The inventions are distinct, each from the other because of the following reasons:

3. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together and have different modes of operation—reducing alkalinity versus isolation from reactive atmospheric gas.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Election

Art Unit: 1712

5. During a telephone conversation with David Petty on 13 September 2005 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-10. Affirmation of this election must be made by applicant in replying to this Office action. Claims 11-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The reference to the parent application 09/915,444 should be amended to reference US 6,623,787 as the application has issued.

7. The use of the trademark BROOKFIELD has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner that might adversely affect their validity as trademarks.

Double Patenting

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

Art Unit: 1712

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 1-10 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 and 12-14 of U.S. Patent No. 6,623,787 (Bowers hereinafter).

Although the conflicting claims are not identical, they are not patentably distinct from each other because Bowers claims a method of stabilizing a carbon dispersion comprising the steps of (a) providing a viscosity-unstable aqueous dispersion of carbon—including, per the specification, carbon black, graphite or combinations of the two (Column 3 Lines 65-67, see *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970))—at a pH of at least 7.5 and is susceptible to an increase in viscosity during use—wherein, per the specification, the viscosity can range from 2 to 10 cps (Column 3 Lines 34-52, see *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970))—and (b) reducing the alkalinity of the viscosity-unstable aqueous dispersion of carbon by an amount effective to reduce the susceptibility to a viscosity increase, wherein the dispersion comprises ammonia in concentration sufficient to make it susceptible to viscosity increase when exposed to reactive atmospherical gasses and wherein the alkalinity reduction step is carried out by adding an agent to the dispersion to lower its

Art Unit: 1712

pH without substantially raising its ionic strength or by reducing the amount of ammonia content of the dispersion.

Claim Rejections - 35 USC § 102 and/or 103

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,476,580 (Thorn hereinafter).

Thorn teaches a method of stabilizing a carbon dispersion, comprising: providing an aqueous dispersion of carbon—including graphite or carbon black (Abstract)—that has a pH of 4 to 14 and a viscosity of 25 to 800 cps; and reducing the alkalinity of the dispersion by the addition of potassium bicarbonate (Abstract, Column 5 Lines 4-6, Column 7 Lines 39-44 and Example 4 Column 15 Line 40 – Column 16 Line 5).

Since Thorn teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the viscosity-instability and susceptibility to viscosity increase of the Thorn composition would inherently be the same as claimed.

Where applicant claims a composition in terms of a function, property or characteristic and the composition of the prior art is the same as that of the claim but the function is not explicitly disclosed by the reference, the examiner may make a rejection under both 35 U.S.C. 102 and 103. "There is nothing inconsistent in concurrent rejections for obviousness under 35 U.S.C. 103 and for anticipation under 35 U.S.C. 102." *In re Best*, 562 F.2d 1252, 1255 n.4, 195 USPQ 430, 433 n.4 (CCPA 1977).

13. Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Thorn in view of US Patent 5,718,746 (Nagasawa hereinafter).

Thorn teaches a method of stabilizing a carbon dispersion, comprising: providing an aqueous dispersion of carbon—including graphite or carbon black (Abstract)—that has a pH of 4 to 14 and a viscosity of 25 to 800 cps; and reducing the alkalinity of the dispersion by the addition of potassium bicarbonate as detailed above.

Since Thorn teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the viscosity-instability and susceptibility to viscosity increase of the Thorn composition would inherently be the same as claimed.

Thorn does not disclose expressly an aqueous carbon dispersion comprising ammonia.

Nagasawa discloses an aqueous carbon black dispersion of pH from 6 to 10 comprising ammonia (Column 6 Lines 30-48).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to perform the method of Thorn using the composition of Nagasawa. The

Art Unit: 1712

motivation to do so would have been to allow the dispersion to be used over a long period of time (Nagasawa Column 6 Line 38-41).

14. Claim 18 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Thorn.

Thorn teaches an aqueous dispersion of carbon—including graphite or carbon black (Abstract)—that has a pH of 4 to 14 and a viscosity of 25 to 800 cps; and reducing the alkalinity of the dispersion by the addition of potassium bicarbonate as detailed above.

Since Thorn teaches the same composition as claimed, one of ordinary skill in the art at the time the invention was made would have expected that the conductivity of the Thorn composition would inherently be the same as claimed.

Thorne does not disclose expressly a composition with a viscosity of less than about 20 cps.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to reduce the viscosity of the Thorn composition to less than 20 cps for the purpose of improving the flow of the dispersion, since it has been held that that discovering an optimum value of a result effective variable involves only ordinary skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA).

Conclusion

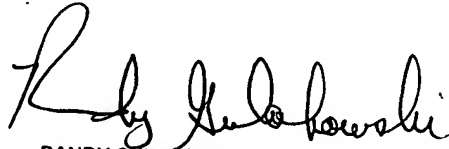
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Kugel whose telephone number is (571) 272-1460. The examiner can normally be reached Monday-Thursday.

Art Unit: 1712

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

16. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJK
Art Unit 1712


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700